



ANNUAL REPORT

1998 / 1999

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Adoption of Business Name

On January 1, 1998, the Saskatchewan Cancer Foundation adopted the business name **Saskatchewan Cancer Agency**. Saskatchewan Cancer Foundation remains the legal name.

Letter of Transmittal

The Honourable Pat Atkinson
Minister of Health
Province of Saskatchewan
Legislative Building
Regina, Saskatchewan
S4S 0B3

Dear Ms. Atkinson:

As Chairperson of the Saskatchewan Cancer Agency Board of Directors, I have the honour to submit herewith the report of the activities of the Saskatchewan Cancer Agency for the fiscal year ending March 31, 1999.

Respectfully submitted,



(Ms.) Pat Krueger
Chairperson

Mission

"Excellence in patient care and cancer control"

Vision

"An improved quality of life and health of people by minimizing the impact of cancer"

Values

• *Respect* • *Equity* • *Excellence* • *Accountability* • *Compassion* • *Honesty*

Organization – March 31, 1999

Board of Directors

Ms. Pat Krueger, North Battleford (Chairperson)
Dr. Borden Bachynski, Regina
Ms. Lena Dubray, Meadow Lake
Ms. Marion Heavin, Melfort
Dr. Craig Milne, Regina
Ms. Jean Perkins, Codette
Dr. David Popkin, Saskatoon
Mr. Gary Semenchuck, Regina
Mr. David Wild, Odessa
Ms. Kathy Zaitsoff, Saskatoon

Program Management

Mr. Robert Allen	Chief Executive Officer
Dr. Mohamed Mohamed	A/Executive Director, Saskatoon Cancer Centre
Mr. John Knoch	Associate Executive Director Saskatoon Cancer Centre
Dr. Arthur Firth	Executive Director, Allan Blair Cancer Centre
Ms. Huguette Gauthier	Associate Executive Director Allan Blair Cancer Centre
Ms. Pam Smith	Executive Director, Epidemiology, Prevention & Screening
Ms. Diane Robson	Associate Executive Director, Epidemiology, Prevention & Screening
Mr. Lloyd Benson	Director, Computer Services
Mr. Dennis Karakochuk	Director, Human Resources
Ms. Valerie Lusk	Director, Finance

Cancer Control Program

Mandate

The mandate of the Saskatchewan Cancer Agency is to deliver a program which incorporates cancer prevention, treatment, research and education for the people of Saskatchewan.

The Agency's two cancer centres — The Allan Blair Cancer Centre in Regina and the Saskatoon Cancer Centre — provide treatment and follow-up services for Saskatchewan cancer patients and serve as centres for the co-ordination of a multi-disciplinary approach to cancer care. Clinic staff work closely with the patient's family physician, consulting physician and surgeon and other persons not directly employed by the Agency to ensure the provision of high quality care.

The Agency's Epidemiology, Prevention and Screening Division develops initiatives for minimizing the impact of cancer, enhancing wellness and reducing morbidity and mortality from cancer through increased understanding of cancer causes, prevention and control. The Screening Program for Breast Cancer is an important early detection component of this Division.

Nature and scope of treatment services

Only patients referred by physicians are treated in the cancer centres. The family physician and/or specialist is responsible for diagnosis. When the physician suspects the presence of cancer and has completed investigations, a diagnosis is arrived at and an evaluation made as to the extent of the disease and the treatment required. The patient is referred to the cancer centre or appropriate specialists and all cases of cancer must be registered with the cancer program.

When a malignant condition is discovered, the cancer centre medical staff, the patient's physician and consultant specialists plan a treatment program. If surgery forms part of the treatment, the patient and physician may choose an appropriate qualified surgeon from a surgical roster maintained by the Agency. If radiation therapy forms part of the treatment plan, it is administered by radiation oncologists at the cancer centres. Chemotherapy, the treatment of cancer through the administration of chemical agents, is administered by cancer centre medical staff and other physicians in consultation with cancer centre staff.

Follow-up after treatment

Regular follow-up examination of patients treated for cancer is a vital procedure in detecting recurrent disease and for assessing the effectiveness of treatments. The Saskatchewan Cancer Agency maintains follow-up activity with all patients receiving regularly scheduled examinations after treatment.

Support services

The staff of the cancer centre, in cooperation with the patient's family physician and consultant specialists, attempt during treatment and follow-up to prepare the patient both physically and psychologically for the future. Patients and their families often go through successive periods of stress and readjustment when faced with problems created by a diagnosis of cancer. Social workers at each cancer centre are available to meet the social and emotional needs of the patients and their families.

The 1998-99 fiscal year can best be characterized as one of continuous growth and adjustment for the Cancer Agency. Change has become a way of life within the health sector and the Agency is no exception.

A significant change for the organization was the announcement by Mr. Peter Peters, the Agency's Chief Executive Officer, that he would retire at the end of 1998. One of the main tasks for the Board was to recruit a replacement. A Selection Committee of the Board was established, selection criteria created, job description updated and, after an extensive search, the task was completed with the selection of Mr. Robert D. (Bob) Allen as the new Chief Executive Officer.

In addition, four Board members retired during the year — Ms. Susan Wagner, Mr. Al Goudie, Ms. Tina Dryhorub and Dr. Stuart Houston. New Board members — Ms. Marion Heavin, Melfort; Ms. Kathy Zaitsoff, Saskatoon; and Mr. Gary Semenchuck, Regina — were appointed to the Board.

With moderate funding increases, we were able to advance in the development of some programs to meet the needs of Saskatchewan cancer patients. We are grateful for the increased funding; however, the challenges facing the organization loom large on the horizon as we begin to see the impact of our aging population affected by the age-related disease of cancer. These demographics, fast-paced technological change and ever-increasing public expectations are elements that make the Board aware of its challenging role in ensuring that policy development, linkages with owners and partners, and obligations to monitor the Agency's outcomes are all being addressed.

Board Policy Development

- The Board developed explicit policies which form the basis for ensuring appropriate linkages with community stakeholders and health partners. With the adoption of the Board's Ends Statements, focus will shift to establishing

processes for monitoring to ensure we achieve our stated goals.

Linkages:

- Interaction with the provincial government continued in a number of ways, including a meeting with the newly-appointed Minister of Health, The Honourable Pat Atkinson, to brief her on various Agency activities.
- In February, 1999, the Agency, along with Judy Junor, Associate Minister of Health, announced the establishment of a high-dose rate brachytherapy program for prostate cancer patients. This provincial program, provided at the Allan Blair Cancer Centre in Regina, is the first of its kind in Canada. It will provide prostate cancer patients with the most advanced cancer treatment available at this time.
- The Board endorsed the establishment of the Canadian Association of Provincial Cancer Agencies, an organization with representation from cancer agencies across the country. This body will act as a point of collaboration and coordination for provincial cancer initiatives.

Monitoring:

- The Board was pleased to endorse the Agency acting as a pilot site for testing of the new Canadian Council of Health Services Accreditation (CCHSA) Achieving Improved Measurement (AIM) standards. The Agency will be surveyed early next year using these new standards and the AIM standards will ultimately be used by CCHSA in surveying all health organizations.
- On the recommendation of management, the Board approved the appointment of a number of new physicians to the Agency's medical staff, including:

At the Allan Blair Cancer Centre in Regina — Dr. Mohammad Salim, Medical Oncologist; Dr. Ismail Yaqoob, Medical Oncologist; Dr. Aamer Mahmud, Radiation

Report of the Chairperson

Oncologist; Dr. Frederik Vernimmen, Radiation Oncologist; and Dr. Patricia Tai, Radiation Oncologist

At the Saskatoon Cancer Centre — Dr. Nasir Shahab, Medical Oncologist; Dr. Robert Lowsky, Hematologist/Medical Oncologist; Dr. Tien Le, Consultant in Gynecological Oncology.

The outgoing Board members, Susan Wagner, Al Goudie, Tina Dryhorub and Dr. Stuart Houston are recognized for their leadership in governing Saskatchewan's cancer program.

We thank Peter Peters, Chief Executive Officer since 1982, for his dedication and commitment to the task of improving cancer services for Saskatchewan residents.

We are pleased to welcome Bob Allen as Chief Executive Officer and are confident he will continue to provide the effective leadership of his predecessors.

In closing, I want to acknowledge the Board and staff of the Cancer Agency as a dedicated group of individuals committed to the task of reducing the burden of cancer for Saskatchewan residents. We thank them for their efforts this past year.

Pat Krueger
Chairperson

Report of the Chief Executive Officer

I am pleased to provide this summary of the Agency's activities for the 1998-99 fiscal year.

The Board has provided strong leadership in the development of the Mission, Vision, Values and Ends Policies for the Cancer Agency. These serve to provide staff with a focus for their dedication, commitment and energies in meeting our service, research, education and partnership goals.

Service:

- The Task Force on Cervical Cancer Screening continued to investigate the potential for establishing a screening program in Saskatchewan. The final results and recommendations of the Task Force will be presented in the new year.
- High dose rate brachytherapy treatment for prostate cancer patients was implemented in February 1999. This ultrasound-assist program is the first of its kind to be established in Canada.
- The community oncology program continued to expand. Fifteen Health Districts now participate in the provision of chemotherapy at their own facilities rather than in the Cancer Centres.
- Staff shortages in medical and radiation oncology and radiation therapy continue to challenge the organization in providing services to Saskatchewan residents. It is only through the extra effort and dedication of Agency staff that cancer patients continue to be served in a timely fashion. Fortunately, by implementing new recruitment initiatives, we have had some success in hiring Oncologists.
- Participation of eligible women in the Screening Program for Breast Cancer increased to 65%, one of the highest rates in Canada.

Research:

- The Agency provided funding for ten research projects valued at \$737,000. (See Research Projects, page 34)
- The Saskatoon Cancer Centre Research Unit attracted \$450,312 in competitive grant support from other agencies, including the Medical Research Council (MRC), National Cancer Institute of Canada (NCIC) and the Health Services Utilization Research Commission (HSURC).
- The Cancer Centre Clinical Trials research activity continued with participation in the National Cancer Institute of Canada, the North Central Cancer Treatment Group, the Radiation Therapy Oncology Group and the Childrens Cancer Group.
- Epidemiology staff participated on collaborative translational, interagency working groups for research into hereditary colorectal and breast cancer.

Education:

- The Agency visual display was set up at the SAHO Conference held in Saskatoon in March 1999.
- The 12th Annual Sylvia Fedoruk Prize in Medical Physics was awarded. (For additional information see page 40)
- The Agency provided financial support to the Third Community Cancer Conference held in Winnipeg in June.
- The 42nd Annual Cancer Symposium was held in Regina in November with the theme "Update on Lymphomas and Hodgkin's and non-Hodgkin's Disease".
- Agency staff gave a poster presentation entitled "Registry Linkages and Partnerships in Saskatchewan" at the North American Association of Central Cancer Registries (NAACCR) Conference. During the Conference, the NAACCR presented the Saskatchewan Cancer Agency Registry with a silver award for quality.

Report of the Chief Executive Officer

Partnerships:

- Partnerships with Health Districts, particularly with our host organizations — Regina Health District and Saskatoon District Health — are essential in assisting the Agency to fulfil its mandate. The Agency initiated a renewal of our formalized partnership agreements with these two districts.
- The continued expansion of the Community Oncology Program is a source of pride for Agency and Health District staff. This partnership allows our respective organizations to ensure that timely, accessible cancer services are provided to patients living in rural Saskatchewan.
- Our association with the University of Saskatchewan, College of Medicine, and the Canadian Cancer Society, Saskatchewan Division, ensures that continued collaboration exists in developing fundamental cancer research activities within Saskatchewan.

Planning for 1999 - 2000:

- Initiate the implementation of the Cervical Cancer Screening Program for Saskatchewan residents.
- Develop a plan for the timely upgrade of the facilities at the Saskatoon Cancer Centre.

- Implement a long-range capital plan, ensuring the timely replacement of critical treatment equipment, including linear accelerators, treatment planning systems and CT simulation.
- Finalize the feasibility of establishing multi-disciplinary breast assessment centres for Saskatchewan women.
- Ensure the Agency is prepared for the pilot survey of the Canadian Council on Health Services Accreditation to be held in the fall of 1999.
- Continue to expand the Community Oncology Program.

In closing, I extend a sincere thank you to the staff, volunteers, other health partners and individuals who have contributed to our success this past year. Your hard work and commitment to reducing the burden of cancer for Saskatchewan residents is greatly appreciated.

Bob Allen
Chief Executive Officer

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Screening Program for Breast Cancer Statistics 1994 - 1998

Centre		1994	1995	1996	1997	1998
Regina	# of Mammograms	7,441	7,697	8,185	8,717	9,198
	# of Abnormals	557	479	645	640	637
	# of Cancers	47	44	59	51	48
Saskatoon	# of Mammograms	5,068	5,796	6,149	6,742	6,686
	# of Abnormals	458	438	507	471	508
	# of Cancers	33	39	31	43	31
Swift Current	# of Mammograms	609	1,201	824	1,298	1,381
	# of Abnormals	55	79	60	88	86
	# of Cancers	2	3	5	11	5
North Battleford	# of Mammograms	923	1,561	1,111	1,596	1,351
	# of Abnormals	79	83	108	138	95
	# of Cancers	6	6	10	10	5
Yorkton	# of Mammograms	2,077	2,013	2,389	2,488	2,783
	# of Abnormals	239	145	170	192	194
	# of Cancers	14	14	13	17	5
Moose Jaw	# of Mammograms	1,490	1,445	1,641	1,708	1,787
	# of Abnormals	119	118	101	102	141
	# of Cancers	5	11	8	16	10
Prince Albert	# of Mammograms	420	2,255	1,739	2,371	2,001
	# of Abnormals	20	153	127	174	172
	# of Cancers	2	11	7	18	9
Mobile	# of Mammograms	7,316	7,601	6,843	9,035	10,115
	# of Abnormals	454	573	592	588	735
	# of Cancers	42	37	39	65	40
TOTAL	# of Mammograms	23,245	29,411	32,286	38,286	41,296
	# of Abnormals	2,181	2,060	2,267	2,669	2,596
	# of Cancers	133	145	171	201	178

Screening Program for Breast Cancer Statistics 1994 - 1998

Centre		1994	1995	1996	1997	1998
Regina	# of Mammograms	7,641	7,639	8,105	8,727	8,148
	# of Abnormals	557	479	645	640	637
	# of Cancers	49	44	59	51	42
Saskatoon	# of Mammograms	5,068	5,796	6,149	6,742	6,686
	# of Abnormals	458	430	507	651	535
	# of Cancers	33	39	31	43	31
Swift Current	# of Mammograms	609	1,201	924	1,296	1,189
	# of Abnormals	55	79	60	88	86
	# of Cancers	2	3	5	11	5
North Battleford	# of Mammograms	923	1,561	1,111	1,596	1,351
	# of Abnormals	79	83	100	138	96
	# of Cancers	6	6	10	10	5
Yorkton	# of Mammograms	2,079	2,013	2,380	2,480	2,780
	# of Abnormals	239	145	170	192	194
	# of Cancers	14	14	13	19	6
Moose Jaw	# of Mammograms	1,490	1,445	1,641	1,708	1,787
	# of Abnormals	119	118	108	143	141
	# of Cancers	5	11	8	16	10
Prince Albert	# of Mammograms	420	2,355	1,737	2,374	2,037
	# of Abnormals	20	153	127	174	172
	# of Cancers	2	11	7	18	9
Mobile	# of Mammograms	7,316	7,601	6,843	9,035	10,115
	# of Abnormals	654	573	550	643	735
	# of Cancers	42	37	39	65	40
TOTAL	# of Mammograms	25,546	29,611	28,890	33,958	34,093
	# of Abnormals	2,181	2,060	2,267	2,669	2,596
	# of Cancers	153	165	172	233	148

Allan Blair Cancer Centre Statistics 1994 – 1998

Clinic Appointments

	1994	1995	1996	1997	1998
New Patient Appointments	1,859	2,019	1,913	2,038	2,019
Review Patient Appointments	11,545	12,031	12,080	11,605	12,493
Radiotherapy Treatments	16,680	17,357	15,587	15,488	16,700
Chemotherapy Treatments	4,565	4,289	4,275	4,655	5,463

Radiotherapy Treatment Visits by Machine Type

	1994	1995	1996	1997	1998
Brachytherapy	16	116	83	92	79
Linear Accelerator	12,806	13,830	12,401	12,703	13,676
Cobalt	3,515	3,024	2,589	2,223	2,697
Stabilipan	343	387	514	470	248
TOTAL	16,680	17,357	15,587	15,488	16,700

Health Record Activities

	1994	1995	1996	1997	1998
Case Registrations	3,757	3,751	3,596	3,790	4,161
Case Visits Recorded	13,479	13,844	14,503	14,220	15,290
Follow-up Reports	13,487	13,375	13,099	12,473	11,816

Saskatoon Cancer Centre Statistics 1994 – 1998

Clinic Appointments

	1994	1995	1996	1997	1998
New Patient Appointments	1,594	1,603	1,793	2,077	2,197
Review Patient Appointments	13,440	13,590	14,239	14,022	13,904
Radiotherapy Treatments	18,016	17,173	17,210	18,522	18,854
Chemotherapy Treatments	5,102	5,274	5,571	5,234	5,708

Radiotherapy Treatment Visits by Machine Type

	1994	1995	1996	1997	1998
Brachytherapy	-	37	12	17	21
Linear Accelerator	16,707	16,744	17,146	18,126	18,326
Cobalt	873	0	0	0	0
X-Ray	436	429	278	379	507
TOTAL	18,016	17,210	17,436	18,522	18,854

Health Record Activities

	1994	1995	1996	1997	1998
Case Registrations	3,670	3,670	3,761	3,779	3,962
Case Visits Recorded	13,271	13,821	14,108	13,859	13,675
Follow-up Reports	12,598	12,419	12,011	11,778	11,627

Allan Blair Cancer Centre Statistics 1994 - 1998

Clinic Appointments

	1994	1995	1996	1997	1998
Review Patient Appointments	11,545	12,031	12,080	11,605	12,493
Chemotherapy Treatments	4,565	4,289	4,275	4,655	5,463

Radiotherapy Treatment Visits by Machine Type

	1994	1995	1996	1997	1998
Linear Accelerator	12,806	13,830	12,401	12,703	13,676
Stabilipan	343	387	514	470	248
TOTAL	16,680	17,357	15,587	15,488	16,700

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	1994	1995	1996	1997	1998
Case Visits Recorded	13,479	13,844	14,503	14,220	15,290

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	1994	1995	1996	1997	1998
Review Patient Appointments	13,440	13,590	14,239	14,022	13,904
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Radiotherapy Treatment Visits by Machine Type

	1994	1995	1996	1997	1998
Linear Accelerator	16,707	16,744	17,146	18,126	18,326
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TOTAL	18,016	17,210	17,436	18,522	18,854

Health Record Activities

	1994	1995	1996	1997	1998
Case Visits Recorded	13,271	13,821	14,108	13,859	13,675

Statistical Tables

INCIDENCE - AGE-SPECIFIC NUMBERS (MALE) - 1998

Site	Age Groups															All Ages
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	
Oral Cavity	0	0	0	0	1	0	2	1	4	2	3	1	3	2	0	19
Esophagus	0	0	0	0	0	1	0	4	1	6	9	6	3	4	3	37
Colon	0	0	0	0	0	0	4	5	12	20	25	25	28	34	42	195
Liver	0	0	0	0	1	1	0	0	1	0	1	1	1	1	0	7
Pancreas	0	0	0	0	0	0	1	0	3	3	6	8	9	12	8	50
Larynx	0	0	0	0	0	1	3	1	1	2	3	7	7	8	4	37
Respiratory System	1	0	0	0	0	1	0	0	0	1	1	1	4	0	1	10
Malignant Melanoma of Skin	0	0	0	0	0	2	5	1	4	5	4	10	3	2	12	48
Prostate	0	0	0	0	0	0	1	1	17	37	86	126	140	112	163	683
Kidney	4	0	0	0	0	4	2	5	8	5	8	10	7	7	13	73
Other Urinary Tract	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	4
Thyroid	0	1	0	2	0	3	1	2	3	0	0	1	2	2	0	17
Lymphoma	1	0	1	1	1	1	3	6	5	7	9	15	17	8	21	96
Multiple Myeloma	0	0	0	0	0	2	0	2	3	1	1	5	2	8	3	27
Primary Unknown	0	0	0	0	1	2	0	3	5	6	6	6	10	12	14	65
TOTALS	23	6	4	11	18	38	42	67	115	163	284	346	407	390	466	2380
Other: In Situ	0	0	0	0	2	2	2	3	6	8	17	17	29	36	35	157

INCIDENCE - AGE-SPECIFIC NUMBERS (FEMALE) - 1998

Site	Age Groups															All
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Ages
Oral Cavity	0	0	0	0	1	0	1	1	2	1	2	1	6	0	5	20
Esophagus	0	0	0	0	0	0	0	0	1	0	1	1	2	3	6	14
Colon	0	0	0	0	1	4	3	5	2	7	12	22	32	27	54	169
Liver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Pancreas	0	0	0	0	0	0	0	2	2	6	5	4	9	7	25	60
Larynx	0	0	0	0	0	0	0	1	1	0	0	2	2	4	0	10
Respiratory System	1	0	0	0	0	1	0	0	1	0	0	1	1	1	1	7
Malignant Melanoma of Skin	0	0	1	2	3	6	6	7	4	3	9	5	9	7	9	71
Cervix: Invasive	0	0	1	6	5	2	7	4	6	6	4	1	1	5	1	49
Ovary	0	1	0	0	4	1	3	4	9	6	4	7	8	11	7	65
Kidney	1	0	0	0	0	0	3	2	4	5	5	10	8	7	9	54
Other Urinary Tract	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	4
Thyroid	0	1	3	5	5	3	3	3	1	5	4	2	4	3	0	42
Lymphoma	0	0	1	2	1	2	3	4	5	4	11	14	10	10	11	78
Multiple Myeloma	0	0	1	0	0	0	0	0	2	3	1	3	5	3	7	25
Primary Unknown	0	0	0	0	0	2	1	3	5	2	6	11	9	10	18	67
TOTALS	16	6	12	20	32	44	83	116	159	157	199	233	316	256	395	2044
Cervix: In Situ	1	9	93	91	80	50	29	13	11	7	4	2	3	2	0	395
TOTALS	1	9	95	93	86	78	83	62	89	79	96	131	168	166	353	1589

Statistical Tables

INCIDENCE - AGE-SPECIFIC NUMBERS (MALE) - 1998

Site	Age Groups															All
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Ages
Lip	0	0	0	0	0	0	1	2	2	3	3	1	6	5	13	36
Oral Cavity	0	0	0	0	1	0	2	1	4	2	3	1	3	2	0	19
Head and Neck	0	0	0	0	0	1	1	2	1	2	3	4	3	2	6	25
Esophagus	0	0	0	0	0	1	0	4	1	6	9	6	3	4	3	37
Stomach	0	0	0	0	1	0	2	1	5	5	4	11	8	12	13	62
Colon	0	0	0	0	0	0	4	5	12	20	25	25	28	34	42	195
Rectum	0	0	0	0	1	1	1	7	10	13	22	19	19	20	31	144
Liver	0	0	0	0	1	1	0	0	1	0	1	1	1	1	0	7
Gall Bladder and Biliary Tract	0	0	0	0	0	0	0	1	1	1	1	2	4	2	4	16
Pancreas	0	0	0	0	0	0	1	0	3	3	6	8	9	12	8	50
Digestive Tract	0	0	0	0	0	0	1	0	0	0	1	0	6	1	1	10
Larynx	0	0	0	0	0	1	3	1	1	2	3	7	7	8	4	37
Trachea, Bronchus, and Lung	0	0	0	1	0	2	0	9	18	22	55	57	73	73	54	364
Respiratory System	1	0	0	0	0	1	0	0	0	1	1	1	4	0	1	10
Bone and Connective Tissue	3	0	0	0	0	3	2	1	0	1	1	0	3	4	2	20
Malignant Melanoma of Skin	0	0	0	0	0	2	5	1	4	5	4	10	3	2	12	48
Breast	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	4
Prostate	0	0	0	0	0	0	1	1	17	37	86	126	140	112	163	683
Male Genital Organs	0	3	1	4	8	5	2	1	1	1	0	1	1	1	0	29
Kidney	4	0	0	0	0	4	2	5	8	5	8	10	7	7	13	73
Bladder	0	0	0	0	0	1	4	4	1	13	19	13	22	30	37	144
Other Urinary Tract	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	4
Brain & Central Nervous System	4	0	0	1	1	2	4	5	1	2	0	1	6	12	5	44
Thyroid	0	1	0	2	0	3	1	2	3	0	0	1	2	2	0	17
Other Endocrine Glands	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
Lymphoma	1	0	1	1	1	1	3	6	5	7	9	15	17	8	21	96
Hodgkin's Disease	1	1	1	2	1	2	1	1	0	0	1	1	0	1	0	13
Multiple Myeloma	0	0	0	0	0	2	0	2	3	1	1	5	2	8	3	27
Leukemia	8	1	0	0	1	3	1	2	5	4	8	14	15	12	14	88
Primary Unknown	0	0	0	0	1	2	0	3	5	6	6	6	10	12	14	65
Other Primaries	1	0	1	0	1	0	0	0	1	0	2	0	3	1	1	11
TOTALS	23	6	4	11	18	38	42	67	115	163	284	346	407	390	466	2380
Non-Melanoma Skin Cancer	0	0	2	3	7	14	38	60	73	76	110	145	201	231	425	1385
Other: In Situ	0	0	0	0	2	2	2	3	6	8	17	17	29	36	35	157
TOTALS	0	0	2	3	9	16	40	63	79	84	127	162	230	267	460	1542

INCIDENCE - AGE-SPECIFIC NUMBERS (FEMALE) - 1998

Site	Age Groups															All
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Ages
Lip	0	0	0	0	0	0	0	0	0	1	0	1	0	2	3	7
Oral Cavity	0	0	0	0	1	0	1	1	2	1	2	1	6	0	5	20
Head and Neck	0	0	0	0	0	0	1	1	1	1	5	1	1	0	3	14
Esophagus	0	0	0	0	0	0	0	0	1	0	1	1	2	3	6	14
Stomach	0	0	0	0	0	0	2	1	0	1	3	3	9	8	13	40
Colon	0	0	0	0	1	4	3	5	2	7	12	22	32	27	54	169
Rectum	0	0	0	0	0	0	3	2	5	2	6	6	16	12	20	72
Liver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Gall Bladder and Biliary Tract	0	0	0	0	0	0	0	0	0	0	0	0	4	2	7	13
Pancreas	0	0	0	0	0	0	0	2	2	6	5	4	9	7	25	60
Digestive Tract	0	0	0	0	0	0	0	0	0	0	1	1	1	3	1	7
Larynx	0	0	0	0	0	0	0	1	1	0	0	2	2	4	0	10
Trachea, Bronchus, and Lung	0	0	0	0	1	2	3	9	11	16	30	45	52	23	31	223
Respiratory System	1	0	0	0	0	1	0	0	1	0	0	1	1	1	1	7
Bone and Connective Tissue	3	2	0	1	0	1	0	2	0	0	2	3	0	0	0	14
Malignant Melanoma of Skin	0	0	1	2	3	6	6	7	4	3	9	5	9	7	9	71
Breast	0	0	0	0	9	15	32	51	73	58	56	56	87	78	105	620
Cervix Invasive	0	0	1	6	5	2	7	4	6	6	4	1	1	5	1	49
Uterus	0	0	0	0	0	0	4	6	10	12	18	15	14	12	16	107
Ovary	0	1	0	0	4	1	3	4	9	6	4	7	8	11	7	65
Female Genital Organs	0	0	0	0	0	0	2	0	4	2	1	1	1	1	8	20
Kidney	1	0	0	0	0	0	3	2	4	5	5	10	8	7	9	54
Bladder	0	0	0	0	1	1	3	2	3	5	3	8	11	10	18	65
Other Urinary Tract	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	4
Brain & Central Nervous System	5	0	1	0	1	0	1	2	3	1	2	6	2	3	3	30
Thyroid	0	1	3	5	5	3	3	3	1	5	4	2	4	3	0	42
Other Endocrine Glands	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lymphoma	0	0	1	2	1	2	3	4	5	4	11	14	10	10	11	78
Hodgkin's Disease	1	1	3	1	0	1	2	1	0	0	0	0	1	0	0	11
Multiple Myeloma	0	0	1	0	0	0	0	0	2	3	1	3	5	3	7	25
Leukemia	2	1	0	2	0	3	0	1	3	5	7	3	7	3	9	46
Primary Unknown	0	0	0	0	0	2	1	3	5	2	6	11	9	10	18	67
Other Primaries	2	0	1	1	0	0	0	1	0	5	1	0	3	1	3	18
TOTALS	16	6	12	20	32	44	83	116	159	157	199	233	316	256	395	2044
Non-Melanoma Skin Cancer	0	0	2	0	5	23	42	33	57	55	72	103	142	143	307	984
Cervix In Situ	1	9	93	91	80	50	29	13	11	7	4	2	3	2	0	395
Other In Situ	0	0	0	2	1	5	12	16	21	17	20	26	23	21	46	210
TOTALS	1	9	95	93	86	78	83	62	89	79	96	131	168	166	353	1589

Statistical Tables

INCIDENCE - AGE-SPECIFIC RATES per 100,000 (MALE) - 1998

Site	Age Groups																All Ages
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +		
Lip	0.0	0.0	0.0	0.0	0.0	0.0	2.5	5.9	7.4	13.9	15.4	5.2	35.7	37.5	83.0	7.0	
Oral Cavity	0.0	0.0	0.0	0.0	2.8	0.0	4.9	3.0	14.7	9.3	15.4	5.2	17.8	15.0	0.0	3.7	
Head and Neck	0.0	0.0	0.0	0.0	0.0	2.4	2.5	5.9	3.7	9.3	15.4	20.9	17.8	15.0	38.3	4.9	
Esophagus	0.0	0.0	0.0	0.0	0.0	2.4	0.0	11.9	3.7	27.8	46.2	31.4	17.8	30.0	19.2	7.2	
Stomach	0.0	0.0	0.0	0.0	2.8	0.0	4.9	3.0	18.4	23.2	20.5	57.6	47.5	90.0	83.0	12.1	
Colon	0.0	0.0	0.0	0.0	0.0	0.0	9.9	14.9	44.2	92.7	128.4	130.9	166.4	255.1	268.2	38.0	
Rectum	0.0	0.0	0.0	0.0	2.8	2.4	2.5	20.8	36.8	60.2	113.0	99.5	112.9	150.1	197.9	28.1	
Liver	0.0	0.0	0.0	0.0	2.8	2.4	0.0	0.0	3.7	0.0	5.1	5.2	5.9	7.5	0.0	1.4	
Gall Bladder and Biliary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.7	4.6	5.1	10.5	23.8	15.0	25.5	3.1	
Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	11.1	13.9	30.8	41.9	53.5	90.0	51.1	9.7	
Digestive Tract	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	5.1	0.0	35.7	7.5	6.4	1.9	
Larynx	0.0	0.0	0.0	0.0	0.0	2.4	7.4	3.0	3.7	9.3	15.4	36.6	41.6	60.0	25.5	7.2	
Trachea, Bronchus, and Lung	0.0	0.0	0.0	3.0	0.0	4.8	0.0	26.8	66.3	101.9	282.5	298.4	433.8	547.7	344.8	70.9	
Respiratory System	0.9	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.6	5.1	5.2	23.8	0.0	6.4	1.9	
Bone and Connective Tissue	2.6	0.0	0.0	0.0	0.0	7.3	4.9	3.0	0.0	4.6	5.1	0.0	17.8	30.0	12.8	3.9	
Malignant Melanoma of Skin	0.0	0.0	0.0	0.0	0.0	4.8	12.4	3.0	14.7	23.2	20.5	52.3	17.8	15.0	76.6	9.4	
Breast	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	5.9	0.0	6.4	0.8	
Prostate	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.0	62.6	171.5	441.8	659.6	831.9	840.3	1040.7	133.1	
Male Genital Organs	0.0	7.2	2.7	11.9	22.5	12.1	4.9	3.0	3.7	4.6	0.0	5.2	5.9	7.5	0.0	5.7	
Kidney	3.4	0.0	0.0	0.0	0.0	9.7	4.9	14.9	29.5	23.2	41.1	52.3	41.6	52.5	83.0	14.2	
Bladder	0.0	0.0	0.0	0.0	0.0	2.4	9.9	11.9	3.7	60.2	97.6	68.1	130.7	225.1	236.2	28.1	
Other Urinary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	5.9	15.0	0.0	0.8	
Brain & Central Nervous System	3.4	0.0	0.0	3.0	2.8	4.8	9.9	14.9	3.7	9.3	0.0	5.2	35.7	90.0	31.9	8.6	
Thyroid	0.0	2.4	0.0	6.0	0.0	7.3	2.5	5.9	11.1	0.0	0.0	5.2	11.9	15.0	0.0	3.3	
Other Endocrine Glands	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	4.6	0.0	0.0	0.0	0.0	0.0	0.4	
Lymphoma	0.9	0.0	2.7	3.0	2.8	2.4	7.4	17.8	18.4	32.4	46.2	78.5	101.0	60.0	134.1	18.7	
Hodgkin's Disease	0.9	2.4	2.7	6.0	2.8	4.8	2.5	3.0	0.0	0.0	5.1	5.2	0.0	7.5	0.0	2.5	
Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	4.8	0.0	5.9	11.1	4.6	5.1	26.2	11.9	60.0	19.2	5.3	
Leukemia	6.9	2.4	0.0	0.0	2.8	7.3	2.5	5.9	18.4	18.5	41.1	73.3	89.1	90.0	89.4	17.1	
Primary Unknown	0.0	0.0	0.0	0.0	2.8	4.8	0.0	8.9	18.4	27.8	30.8	31.4	59.4	90.0	89.4	12.7	
Other Primaries	0.9	0.0	2.7	0.0	2.8	0.0	0.0	0.0	3.7	0.0	10.3	0.0	17.8	7.5	6.4	2.1	

TOTAL - ALL SITES = 463.8

INCIDENCE - AGE-SPECIFIC RATES per 100,000 (FEMALE) - 1998

Site	Age Groups															All
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Ages
Lip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	5.0	0.0	11.4	11.2	1.3
Oral Cavity	0.0	0.0	0.0	0.0	2.8	0.0	2.5	3.1	7.6	4.6	10.0	5.0	30.7	0.0	18.7	3.9
Head and Neck	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.1	3.8	4.6	25.0	5.0	5.1	0.0	11.2	2.7
Esophagus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	5.0	5.0	10.2	17.0	22.4	2.7
Stomach	0.0	0.0	0.0	0.0	0.0	0.0	5.1	3.1	0.0	4.6	15.0	15.0	46.1	45.4	48.5	7.7
Colon	0.0	0.0	0.0	0.0	2.8	9.7	7.6	15.6	7.6	32.2	60.0	110.1	163.9	153.2	201.6	32.6
Rectum	0.0	0.0	0.0	0.0	0.0	0.0	7.6	6.2	19.1	9.2	30.0	30.0	82.0	68.1	74.7	13.9
Liver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.2
Gall Bladder and Biliary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.5	11.4	26.1	2.5
Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	7.6	27.6	25.0	20.0	46.1	39.7	93.3	11.6
Digestive Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.1	17.0	3.7	1.3
Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.8	0.0	0.0	10.0	10.2	22.7	0.0	1.9
Trachea, Bronchus, and Lung	0.0	0.0	0.0	0.0	2.8	4.8	7.6	28.0	42.0	73.7	150.0	225.3	266.4	130.5	115.7	43.0
Respiratory System	0.9	0.0	0.0	0.0	0.0	2.4	0.0	0.0	3.8	0.0	0.0	5.0	5.1	5.7	3.7	1.3
Bone and Connective Tissue	2.7	5.1	0.0	3.1	0.0	2.4	0.0	6.2	0.0	0.0	10.0	15.0	0.0	0.0	0.0	2.7
Malignant Melanoma of Skin	0.0	0.0	2.8	6.2	8.4	14.5	15.3	21.8	15.3	13.8	45.0	25.0	46.1	39.7	33.6	13.7
Breast	0.0	0.0	0.0	0.0	25.3	36.4	81.5	158.6	278.5	267.2	280.1	280.3	445.7	442.7	391.9	119.5
Cervix, Invasive	0.0	0.0	2.8	18.5	14.1	4.8	17.8	12.4	22.9	27.6	20.0	5.0	5.1	28.4	3.7	9.4
Uterus	0.0	0.0	0.0	0.0	0.0	0.0	10.2	18.7	38.1	55.3	90.0	75.1	71.7	68.1	59.7	20.6
Ovary	0.0	2.5	0.0	0.0	11.2	2.4	7.6	12.4	34.3	27.6	20.0	35.0	41.0	62.4	26.1	12.5
Female Genital Organs	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	15.3	9.2	5.0	5.0	5.1	5.7	29.9	3.9
Kidney	0.9	0.0	0.0	0.0	0.0	0.0	7.6	6.2	15.3	23.0	25.0	50.1	41.0	39.7	33.6	10.4
Bladder	0.0	0.0	0.0	0.0	2.8	2.4	7.6	6.2	11.4	23.0	15.0	40.0	56.3	56.8	67.2	12.5
Other Urinary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.8	0.0	0.0	0.0	5.1	0.0	3.7	0.8
Brain & Central Nervous System	4.5	0.0	2.8	0.0	2.8	0.0	2.5	6.2	11.4	4.6	10.0	30.0	10.2	17.0	11.2	5.8
Thyroid	0.0	2.5	8.4	15.4	14.1	7.3	7.6	9.3	3.8	23.0	20.0	10.0	20.5	17.0	0.0	8.1
Other Endocrine Glands	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Lymphoma	0.0	0.0	2.8	6.2	2.8	4.8	7.6	12.4	19.1	18.4	55.0	70.1	51.2	56.8	41.1	15.0
Hodgkin's Disease	0.9	2.5	8.4	3.1	0.0	2.4	5.1	3.1	0.0	0.0	0.0	0.0	5.1	0.0	0.0	2.1
Multiple Myeloma	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	7.6	13.8	5.0	15.0	25.6	17.0	26.1	4.8
Leukemia	1.8	2.5	0.0	6.2	0.0	7.3	0.0	3.1	11.4	23.0	35.0	15.0	35.9	17.0	33.6	8.9
Primary Unknown	0.0	0.0	0.0	0.0	0.0	4.8	2.5	9.3	19.1	9.2	30.0	55.1	46.1	56.8	67.2	12.9
Other Primaries	1.8	0.0	2.8	3.1	0.0	0.0	0.0	3.1	0.0	23.0	5.0	0.0	15.4	5.7	11.2	3.5
TOTAL - ALL SITES = 394.0																

Statistical Tables

INCIDENCE - AGE-SPECIFIC RATES per 100,000 (MALE) - 1998

Site	Age Groups															All Ages
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	
Oral Cavity	0.0	0.0	0.0	0.0	2.8	0.0	4.9	3.0	14.7	9.3	15.4	5.2	17.8	15.0	0.0	3.7
Esophagus	0.0	0.0	0.0	0.0	0.0	2.4	0.0	11.9	3.7	27.8	46.2	31.4	17.8	30.0	19.2	7.2
Colon	0.0	0.0	0.0	0.0	0.0	0.0	9.9	14.9	44.2	92.7	128.4	130.9	166.4	255.1	268.2	38.0
Liver	0.0	0.0	0.0	0.0	2.8	2.4	0.0	0.0	3.7	0.0	5.1	5.2	5.9	7.5	0.0	1.4
Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	11.1	13.9	30.8	41.9	53.5	90.0	51.1	9.7
Larynx	0.0	0.0	0.0	0.0	0.0	2.4	7.4	3.0	3.7	9.3	15.4	36.6	41.6	60.0	25.5	7.2
Respiratory System	0.9	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.6	5.1	5.2	23.8	0.0	6.4	1.9
Malignant Melanoma of Skin	0.0	0.0	0.0	0.0	0.0	4.8	12.4	3.0	14.7	23.2	20.5	52.3	17.8	15.0	76.6	9.4
Prostate	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.0	62.6	171.5	441.8	659.6	831.9	840.3	1040.7	133.1
Kidney	3.4	0.0	0.0	0.0	0.0	9.7	4.9	14.9	29.5	23.2	41.1	52.3	41.6	52.5	83.0	14.2
Other Urinary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	5.9	15.0	0.0	0.8
Thyroid	0.0	2.4	0.0	6.0	0.0	7.3	2.5	5.9	11.1	0.0	0.0	5.2	11.9	15.0	0.0	3.3
Lymphoma	0.9	0.0	2.7	3.0	2.8	2.4	7.4	17.8	18.4	32.4	46.2	78.5	101.0	60.0	134.1	18.7
Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	4.8	0.0	5.9	11.1	4.6	5.1	26.2	11.9	60.0	19.2	5.3
Primary Unknown	0.0	0.0	0.0	0.0	2.8	4.8	0.0	8.9	18.4	27.8	30.8	31.4	59.4	90.0	89.4	12.7

TOTAL - ALL SITES = 463.8

INCIDENCE - AGE-SPECIFIC RATES per 100,000 (FEMALE) - 1998

Site	Age Groups															All Ages
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	
Oral Cavity	0.0	0.0	0.0	0.0	2.8	0.0	2.5	3.1	7.6	4.6	10.0	5.0	30.7	0.0	18.7	3.9
Esophagus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	5.0	5.0	10.2	17.0	22.4	2.7
Colon	0.0	0.0	0.0	0.0	2.8	9.7	7.6	15.6	7.6	32.2	60.0	110.1	163.9	153.2	201.6	32.6
Liver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.2
Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	7.6	27.6	25.0	20.0	46.1	39.7	93.3	11.6
Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.8	0.0	0.0	10.0	10.2	22.7	0.0	1.9
Respiratory System	0.9	0.0	0.0	0.0	0.0	2.4	0.0	0.0	3.8	0.0	0.0	5.0	5.1	5.7	3.7	1.3
Malignant Melanoma of Skin	0.0	0.0	2.8	6.2	8.4	14.5	15.3	21.8	15.3	13.8	45.0	25.0	46.1	39.7	33.6	13.7
Cervix: Invasive	0.0	0.0	2.8	18.5	14.1	4.8	17.8	12.4	22.9	27.6	20.0	5.0	5.1	28.4	3.7	9.4
Ovary	0.0	2.5	0.0	0.0	11.2	2.4	7.6	12.4	34.3	27.6	20.0	35.0	41.0	62.4	26.1	12.5
Kidney	0.9	0.0	0.0	0.0	0.0	0.0	7.6	6.2	15.3	23.0	25.0	50.1	41.0	39.7	33.6	10.4
Other Urinary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.8	0.0	0.0	0.0	5.1	0.0	3.7	0.8
Thyroid	0.0	2.5	8.4	15.4	14.1	7.3	7.6	9.3	3.8	23.0	20.0	10.0	20.5	17.0	0.0	8.1
Lymphoma	0.0	0.0	2.8	6.2	2.8	4.8	7.6	12.4	19.1	18.4	55.0	70.1	51.2	56.8	41.1	15.0
Multiple Myeloma	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	7.6	13.8	5.0	15.0	25.6	17.0	26.1	4.8
Primary Unknown	0.0	0.0	0.0	0.0	0.0	4.8	2.5	9.3	19.1	9.2	30.0	55.1	46.1	56.8	67.2	12.9

TOTAL - ALL SITES = 394.0

Statistical Tables

MORTALITY - AGE-SPECIFIC NUMBERS (MALE) - 1998

Site	Age Groups															All Ages
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	
Oral Cavity	0	0	0	0	0	1	0	0	0	1	0	0	0	2	2	6
Esophagus	0	0	0	0	0	0	2	4	2	2	6	8	4	6	3	37
Colon	0	0	0	0	0	1	0	1	2	5	4	10	18	16	25	82
Liver	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
Pancreas	0	0	0	0	0	0	0	0	2	4	6	7	14	16	11	60
Larynx	0	0	0	0	0	0	0	0	0	1	0	3	3	4	2	13
Respiratory System	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	3
Malignant Melanoma of Skin	0	0	0	0	1	1	0	3	0	1	0	1	1	1	4	13
Prostate	0	0	0	0	0	0	0	1	2	2	6	17	26	45	117	216
Kidney	0	0	1	0	0	0	0	1	2	5	4	3	3	5	5	29
Other Urinary Tract	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4
Thyroid	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lymphoma	0	0	0	2	0	1	2	3	0	2	4	11	7	5	9	46
Multiple Myeloma	0	0	0	0	0	1	0	0	2	0	3	7	3	5	6	27
Primary Unknown	0	0	1	0	0	1	0	3	9	1	13	8	5	12	21	74
TOTALS	4	2	3	6	1	12	10	24	43	54	112	142	192	238	367	1210
Other: In Situ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	1	0	0	0	1	0	1	1	1	8	8	9	9	44	83

MORTALITY - AGE-SPECIFIC NUMBERS (FEMALE) - 1998

Site	Age Groups															All
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Ages
All	1	0	2	1	3	11	27	25	34	49	93	118	149	149	318	980
Oral Cavity	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	4
Esophagus	0	0	0	0	0	0	0	0	0	0	1	1	2	2	3	9
Colon	0	0	0	0	0	3	4	1	2	4	7	7	9	14	37	88
Liver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pancreas	0	0	0	0	0	0	1	2	3	5	5	4	15	9	29	73
Larynx	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	3
Respiratory System	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	3
Malignant Melanoma of Skin	0	0	0	0	0	0	1	0	1	1	2	0	1	0	2	8
Cervix: Invasive	0	0	0	0	0	0	0	1	2	0	1	0	0	1	2	7
Ovary	0	0	1	0	0	3	2	0	0	5	4	6	9	14	12	56
Kidney	0	0	0	0	0	1	1	0	2	0	3	3	4	4	3	21
Other Urinary Tract	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thyroid	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	4
Lymphoma	0	0	0	0	0	1	2	1	0	1	7	2	8	8	12	42
Multiple Myeloma	0	0	0	0	0	0	0	0	1	0	2	2	4	4	8	21
Primary Unknown	0	0	0	0	0	1	3	2	1	4	2	9	11	9	29	71
TOTALS	1	0	2	1	3	11	27	25	34	49	93	118	149	149	318	980
Cervix: In Situ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Death Certificates	0	0	0	0	0	1	0	1	0	1	4	4	13	9	62	95

Statistical Tables

MORTALITY - AGE-SPECIFIC NUMBERS (MALE) - 1998

Site	Age Groups															All
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	Ages
Lip	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Oral Cavity	0	0	0	0	0	1	0	0	0	1	0	0	0	2	2	6
Head and Neck	0	0	0	0	0	0	0	0	1	0	1	3	2	0	3	10
Esophagus	0	0	0	0	0	0	2	4	2	2	6	8	4	6	3	37
Stomach	0	0	0	0	0	0	0	0	2	5	4	2	6	10	8	37
Colon	0	0	0	0	0	1	0	1	2	5	4	10	18	16	25	82
Rectum	0	0	0	0	0	2	0	0	0	2	2	5	6	10	13	40
Liver	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
Gall Bladder and Biliary Tract	0	0	0	0	0	0	0	0	0	0	0	2	5	4	4	15
Pancreas	0	0	0	0	0	0	0	0	2	4	6	7	14	16	11	60
Digestive Tract	0	0	0	0	0	0	0	0	1	2	3	3	4	4	10	27
Larynx	0	0	0	0	0	0	0	0	0	1	0	3	3	4	2	13
Trachea, Bronchus, and Lung	0	0	0	1	0	1	0	4	11	18	39	37	60	62	78	311
Respiratory System	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	3
Bone and Connective Tissue	0	1	1	0	0	1	0	2	1	0	1	0	1	2	3	13
Malignant Melanoma of Skin	0	0	0	0	1	1	0	3	0	1	0	1	1	1	4	13
Breast	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Prostate	0	0	0	0	0	0	0	1	2	2	6	17	26	45	117	216
Male Genital Organs	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	4
Kidney	0	0	1	0	0	0	0	1	2	5	4	3	3	5	5	29
Bladder	0	0	0	0	0	0	2	0	0	0	3	5	5	7	17	39
Other Urinary Tract	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4
Brain & Central Nervous System	2	1	0	1	0	0	1	2	4	2	6	3	4	7	5	38
Thyroid	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Other Endocrine Glands	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
Lymphoma	0	0	0	2	0	1	2	3	0	2	4	11	7	5	9	46
Hodgkin's Disease	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Multiple Myeloma	0	0	0	0	0	1	0	0	2	0	3	7	3	5	6	27
Leukemia	2	0	0	2	0	1	1	0	1	1	5	7	6	7	13	46
Primary Unknown	0	0	1	0	0	1	0	3	9	1	13	8	5	12	21	74
Other Primaries	0	0	0	0	0	0	0	0	0	0	1	0	4	0	5	10
TOTALS	4	2	3	6	1	12	10	24	43	54	112	142	192	238	367	1210
Non-Melanoma Skin Cancer	0	1	0	0	0	1	0	1	0	0	0	0	0	0	2	5
Other: In Situ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Death Certificates	0	0	0	0	0	0	0	0	1	1	8	8	9	9	42	78
TOTALS	0	1	0	0	0	1	0	1	1	1	8	8	9	9	44	83

MORTALITY - AGE-SPECIFIC NUMBERS (FEMALE) - 1998

Site	Age Groups															All
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	Ages
Lip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oral Cavity	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	4
Head and Neck	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	3
Esophagus	0	0	0	0	0	0	0	0	0	0	1	1	2	2	3	9
Stomach	0	0	0	0	0	0	1	1	1	0	1	3	1	7	16	31
Colon	0	0	0	0	0	3	4	1	2	4	7	7	9	14	37	88
Rectum	0	0	0	0	0	0	0	0	0	2	0	2	1	3	7	15
Liver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gall Bladder and Biliary Tract	0	0	0	0	0	0	0	0	0	1	0	0	1	3	12	17
Pancreas	0	0	0	0	0	0	1	2	3	5	5	4	15	9	29	73
Digestive Tract	0	0	0	0	0	0	0	0	0	0	1	9	2	6	20	38
Larynx	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	3
Trachea, Bronchus, and Lung	0	0	0	0	1	0	1	8	3	9	20	36	43	28	40	189
Respiratory System	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	3
Bone and Connective Tissue	0	0	1	0	1	0	1	0	0	0	0	1	0	3	2	9
Malignant Melanoma of Skin	0	0	0	0	0	0	1	0	1	1	2	0	1	0	2	8
Breast	0	0	0	0	1	1	7	6	10	10	23	16	21	17	45	157
Cervix: Invasive	0	0	0	0	0	0	0	1	2	0	1	0	0	1	2	7
Uterus	0	0	0	0	0	0	1	2	1	0	1	5	4	4	3	21
Ovary	0	0	1	0	0	3	2	0	0	5	4	6	9	14	12	56
Female Genital Organs	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	3
Kidney	0	0	0	0	0	1	1	0	2	0	3	3	4	4	3	21
Bladder	0	0	0	0	0	0	0	0	0	1	2	2	2	2	15	24
Other Urinary Tract	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brain & Central Nervous System	1	0	0	1	0	0	2	0	2	0	3	4	2	2	2	19
Thyroid	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	4
Other Endocrine Glands	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Lymphoma	0	0	0	0	0	1	2	1	0	1	7	2	8	8	12	42
Hodgkin's Disease	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	3
Multiple Myeloma	0	0	0	0	0	0	0	0	1	0	2	2	4	4	8	21
Leukemia	0	0	0	0	0	0	0	0	1	4	4	2	5	5	8	29
Primary Unknown	0	0	0	0	0	1	3	2	1	4	2	9	11	9	29	71
Other Primaries	0	0	0	0	0	0	0	0	1	0	1	1	1	3	4	11
TOTALS	1	0	2	1	3	11	27	25	34	49	93	118	149	149	318	980
Non-Melanoma Skin Cancer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Cervix: In Situ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other: In Situ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Death Certificates	0	0	0	0	0	1	0	1	0	1	4	4	13	9	62	95
TOTALS	0	0	0	0	0	1	0	1	0	1	4	4	13	9	63	96

Statistical Tables

MORTALITY - AGE-SPECIFIC RATES per 100,000 (MALE) - 1998

Site	Age Groups															All Ages
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	
Lip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.2
Oral Cavity	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.6	0.0	0.0	0.0	15.0	12.8	1.2
Head and Neck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	5.1	15.7	11.9	0.0	19.2	1.9
Esophagus	0.0	0.0	0.0	0.0	0.0	0.0	4.9	11.9	7.4	9.3	30.8	41.9	23.8	45.0	19.2	7.2
Stomach	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	23.2	20.5	10.5	35.7	75.0	51.1	7.2
Colon	0.0	0.0	0.0	0.0	0.0	2.4	0.0	3.0	7.4	23.2	20.5	52.3	107.0	120.0	159.6	16.0
Rectum	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	9.3	10.3	26.2	35.7	75.0	83.0	7.8
Liver	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.4
Gall Bladder and Biliary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	29.7	30.0	25.5	2.9
Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	18.5	30.8	36.6	83.2	120.0	70.2	11.7
Digestive Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	9.3	15.4	15.7	23.8	30.0	63.8	5.3
Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	15.7	17.8	30.0	12.8	2.5
Trachea, Bronchus, and Lung	0.0	0.0	0.0	3.0	0.0	2.4	0.0	11.9	40.5	83.4	200.3	193.7	356.5	465.2	498.0	60.6
Respiratory System	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.6
Bone and Connective Tissue	0.0	2.4	2.7	0.0	0.0	2.4	0.0	5.9	3.7	0.0	5.1	0.0	5.9	15.0	19.2	2.5
Malignant Melanoma of Skin	0.0	0.0	0.0	0.0	2.8	2.4	0.0	8.9	0.0	4.6	0.0	5.2	5.9	7.5	25.5	2.5
Breast	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.4
Prostate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	7.4	9.3	30.8	89.0	154.5	337.6	747.0	42.1
Male Genital Organs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	5.9	15.0	0.0	0.8
Kidney	0.0	0.0	2.7	0.0	0.0	0.0	0.0	3.0	7.4	23.2	20.5	15.7	17.8	37.5	31.9	5.7
Bladder	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	15.4	26.2	29.7	52.5	108.5	7.6
Other Urinary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	7.5	12.8	0.8
Brain & Central Nervous System	1.7	2.4	0.0	3.0	0.0	0.0	2.5	5.9	14.7	9.3	30.8	15.7	23.8	52.5	31.9	7.4
Thyroid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.2
Other Endocrine Glands	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Lymphoma	0.0	0.0	0.0	6.0	0.0	2.4	4.9	8.9	0.0	9.3	20.5	57.6	41.6	37.5	57.5	9.0
Hodgkin's Disease	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	6.4	0.4
Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	7.4	0.0	15.4	36.6	17.8	37.5	38.3	5.3
Leukemia	1.7	0.0	0.0	6.0	0.0	2.4	2.5	0.0	3.7	4.6	25.7	36.6	35.7	52.5	83.0	9.0
Primary Unknown	0.0	0.0	2.7	0.0	0.0	2.4	0.0	8.9	33.2	4.6	66.8	41.9	29.7	90.0	134.1	14.4
Other Primaries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	23.8	0.0	31.9	1.9

TOTAL - ALL SITES = 235.8

MORTALITY - AGE-SPECIFIC RATES per 100,000 (FEMALE) - 1998

Site	Age Groups															All Ages
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 +	
Lip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oral Cavity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	5.1	0.0	7.5	0.8
Head and Neck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	5.0	0.0	0.0	0.0	3.7	0.6
Esophagus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	10.2	11.4	11.2	1.7
Stomach	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.1	3.8	0.0	5.0	15.0	5.1	39.7	59.7	6.0
Colon	0.0	0.0	0.0	0.0	0.0	7.3	10.2	3.1	7.6	18.4	35.0	35.0	46.1	79.5	138.1	17.0
Rectum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0	10.0	5.1	17.0	26.1	2.9
Liver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gall Bladder and Biliary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	5.1	17.0	44.8	3.3
Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.2	11.4	23.0	25.0	20.0	76.8	51.1	108.2	14.1
Digestive Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	45.1	10.2	34.1	74.7	7.3
Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	5.0	0.0	0.0	3.7	0.6
Trachea, Bronchus, and Lung	0.0	0.0	0.0	0.0	2.8	0.0	2.5	24.9	11.4	41.5	100.0	180.2	220.3	158.9	149.3	36.4
Respiratory System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	5.0	0.0	0.0	3.7	0.6
Bone and Connective Tissue	0.0	0.0	2.8	0.0	2.8	0.0	2.5	0.0	0.0	0.0	0.0	5.0	0.0	17.0	7.5	1.7
Malignant Melanoma of Skin	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	3.8	4.6	10.0	0.0	5.1	0.0	7.5	1.5
Breast	0.0	0.0	0.0	0.0	2.8	2.4	17.8	18.7	38.1	46.1	115.0	80.1	107.6	96.5	168.0	30.3
Cervix, Invasive	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7.6	0.0	5.0	0.0	0.0	5.7	7.5	1.3
Uterus	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.2	3.8	0.0	5.0	25.0	20.5	22.7	11.2	4.0
Ovary	0.0	0.0	2.8	0.0	0.0	7.3	5.1	0.0	0.0	23.0	20.0	30.0	46.1	79.5	44.8	10.8
Female Genital Organs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.1	0.0	3.7	0.6
Kidney	0.0	0.0	0.0	0.0	0.0	2.4	2.5	0.0	7.6	0.0	15.0	15.0	20.5	22.7	11.2	4.0
Bladder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	10.0	10.0	10.2	11.4	56.0	4.6
Other Urinary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brain & Central Nervous System	0.9	0.0	0.0	3.1	0.0	0.0	5.1	0.0	7.6	0.0	15.0	20.0	10.2	11.4	7.5	3.7
Thyroid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	5.7	3.7	0.8
Other Endocrine Glands	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Lymphoma	0.0	0.0	0.0	0.0	0.0	2.4	5.1	3.1	0.0	4.6	35.0	10.0	41.0	45.4	44.8	8.1
Hodgkin's Disease	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.6	0.0	0.0	5.1	0.0	0.0	0.6
Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	10.0	10.0	20.5	22.7	29.9	4.0
Leukemia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	18.4	20.0	10.0	25.6	28.4	29.9	5.6
Primary Unknown	0.0	0.0	0.0	0.0	0.0	2.4	7.6	6.2	3.8	18.4	10.0	45.1	56.3	51.1	108.2	13.7
Other Primaries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	5.0	5.0	5.1	17.0	14.9	2.1

TOTAL - ALL SITES = 188.9

Statistical Tables

MORTALITY - AGE-SPECIFIC RATES per 100,000 (MALE) - 1998

Site	Age Groups															All Ages
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	
Oral Cavity	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.6	0.0	0.0	0.0	15.0	12.8	1.2
Esophagus	0.0	0.0	0.0	0.0	0.0	0.0	4.9	11.9	7.4	9.3	30.8	41.9	23.8	45.0	19.2	7.2
Colon	0.0	0.0	0.0	0.0	0.0	2.4	0.0	3.0	7.4	23.2	20.5	52.3	107.0	120.0	159.6	16.0
Liver	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.4
Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	18.5	30.8	36.6	83.2	120.0	70.2	11.7
Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	15.7	17.8	30.0	12.8	2.5
Respiratory System	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.6
Malignant Melanoma of Skin	0.0	0.0	0.0	0.0	2.8	2.4	0.0	8.9	0.0	4.6	0.0	5.2	5.9	7.5	25.5	2.5
Prostate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	7.4	9.3	30.8	89.0	154.5	337.6	747.0	42.1
Kidney	0.0	0.0	2.7	0.0	0.0	0.0	0.0	3.0	7.4	23.2	20.5	15.7	17.8	37.5	31.9	5.7
Other Urinary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	7.5	12.8	0.8
Thyroid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.2
Lymphoma	0.0	0.0	0.0	6.0	0.0	2.4	4.9	8.9	0.0	9.3	20.5	57.6	41.6	37.5	57.5	9.0
Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	7.4	0.0	15.4	36.6	17.8	37.5	38.3	5.3
Primary Unknown	0.0	0.0	2.7	0.0	0.0	2.4	0.0	8.9	33.2	4.6	66.8	41.9	29.7	90.0	134.1	14.4

TOTAL - ALL SITES = 235.8

MORTALITY - AGE-SPECIFIC RATES per 100,000 (FEMALE) - 1998

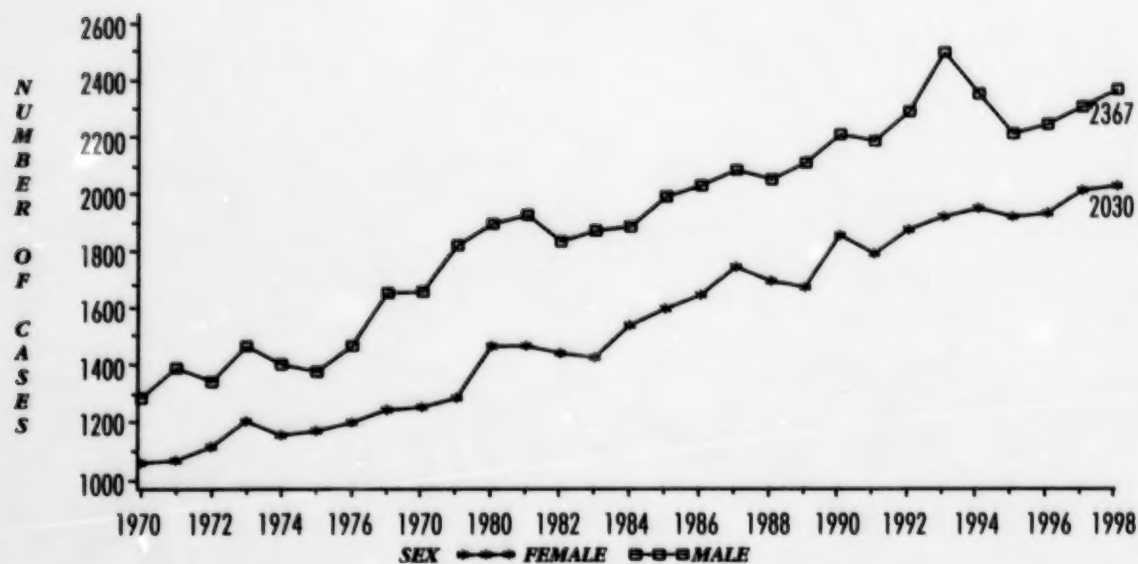
Site	Age Groups															All Ages
	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	
Oral Cavity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	5.1	0.0	7.5	0.8
Esophagus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	10.2	11.4	11.2	1.7
Colon	0.0	0.0	0.0	0.0	0.0	7.3	10.2	3.1	7.6	18.4	35.0	35.0	46.1	79.5	138.1	17.0
Liver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.2	11.4	23.0	25.0	20.0	76.8	51.1	108.2	14.1
Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	5.0	0.0	0.0	3.7	0.6
Respiratory System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	5.0	0.0	0.0	3.7	0.6
Malignant Melanoma of Skin	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	3.8	4.6	10.0	0.0	5.1	0.0	7.5	1.5
Cervix: Invasive	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7.6	0.0	5.0	0.0	0.0	5.7	7.5	1.3
Ovary	0.0	0.0	2.8	0.0	0.0	7.3	5.1	0.0	0.0	23.0	20.0	30.0	46.1	79.5	44.8	10.8
Kidney	0.0	0.0	0.0	0.0	0.0	2.4	2.5	0.0	7.6	0.0	15.0	15.0	20.5	22.7	11.2	4.0
Other Urinary Tract	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thyroid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	5.7	3.7	0.8
Lymphoma	0.0	0.0	0.0	0.0	0.0	2.4	5.1	3.1	0.0	4.6	35.0	10.0	41.0	45.4	44.8	8.1
Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	10.0	10.0	20.5	22.7	29.9	4.0
Primary Unknown	0.0	0.0	0.0	0.0	0.0	2.4	7.6	6.2	3.8	18.4	10.0	45.1	56.3	51.1	108.2	13.7

TOTAL - ALL SITES = 188.9

**PROVINCIAL INCIDENCE
1970 - 1998**



**NUMBER OF CASES
1970 - 1998**



SEX —◆— FEMALE —■— MALE

NON-MELANOMA SKIN AND IN-SITU CASES EXCLUDED

PEDIATRIC INCIDENCE/MORTALITY - 1998 - Both Clinics

Site		Age Groups					Total
		< 1	1-4	5-9	10-14	15-16	
	F	0/0	0/0	2/0	0/0	0/0	2/0
	F	0/0	1/0	0/0	0/0	0/0	1/0
	F	1/0	0/0	0/0	0/0	0/0	1/0
	F	0/0	0/0	0/0	0/0	0/0	0/0
	F	1/0	0/0	0/0	0/0	0/0	1/0
	F	0/0	0/1	3/0	2/0	0/0	5/1
	F	0/0	0/0	0/0	1/0	0/0	1/0
	F	1/0	0/0	1/0	0/0	0/0	2/0
	F	1/0	1/0	1/0	0/0	0/0	3/0
TOTALS	M	1/0	12/2	4/2	6/0	1/1	24/5
	F	4/0	2/1	7/0	3/0	0/0	16/1

Public Information Available

- Annual Report
- Saskatchewan Cancer Agency Brochures
- List of payees

PEDIATRIC INCIDENCE/MORTALITY - 1998 - Both Clinics

Site		Age Groups					Total
		< 1	1-4	5-9	10-14	15-16	
Bone	M	0/0	0/0	1/0	1/0	0/0	2/0
	F	0/0	0/0	2/0	0/0	0/0	2/0
Soft Tissue	M	0/0	0/0	0/0	1/0	0/0	1/0
	F	0/0	1/0	0/0	0/0	0/0	1/0
Kidney	M	0/0	4/0	0/0	0/0	0/0	4/0
	F	1/0	0/0	0/0	0/0	0/0	1/0
Genital Organs	M	0/0	0/0	0/0	0/0	0/0	0/0
	F	0/0	0/0	0/0	0/0	0/0	0/0
Eye	M	0/0	0/0	0/0	0/0	0/0	0/0
	F	1/0	0/0	0/0	0/0	0/0	1/0
Brain, CNS	M	1/0	2/0	1/2	0/0	0/1	4/3
	F	0/0	0/1	3/0	2/0	0/0	5/1
Lymphoma	M	0/0	0/0	0/0	2/0	1/0	3/0
	F	0/0	0/0	0/0	1/0	0/0	1/0
Leukemia	M	0/0	5/2	2/0	1/0	0/0	8/2
	F	1/0	0/0	1/0	0/0	0/0	2/0
Other	M	0/0	1/0	0/0	1/0	0/0	2/0
	F	1/0	1/0	1/0	0/0	0/0	3/0
TOTALS	M	1/0	12/2	4/2	6/0	1/1	24/5
	F	4/0	2/1	7/0	3/0	0/0	16/1

Public Information Available

- *Annual Report*
- *Saskatchewan Cancer Agency Brochures*
- *List of payees*

Report of Management

Management is responsible for the integrity of the financial data reported by the Foundation. Fulfilling this responsibility requires the preparation and presentation of financial statements, in accordance with generally accepted accounting principles in Canada which are consistently applied, with any exceptions specifically described in the financial statements.

Management uses internal accounting controls, offers direction through Foundation-wide policies and procedures and exercises its best judgement in order that the statements reflect fairly the financial position, results of operations and changes in financial position.

In order to gather and control financial data, the Foundation has established accounting and reporting systems supported by internal controls. In establishing systems of internal control, management weighs the cost of such systems against the benefits that it believes can be obtained. Management believes that the existing internal controls provide reasonable assurance

that assets are safe-guarded and that the financial records are reliable for preparing financial statements and other data and maintaining accountability for assets.

The Provincial Auditor has examined the Saskatchewan Cancer Foundation's balance sheet as at March 31, 1999 and the statements of revenue and expenditure, fund balance and changes in financial position for the year then ended. Their responsibility is to express an opinion on the fairness of management's financial statements. The Auditor's Report outlines the scope of their audit and their opinion.

On behalf of Management.

Robert D. Allen
Chief Executive Officer
June 25, 1999

Valerie J. Lusk
Director, Finance



Provincial Auditor Saskatchewan

1500 Chinese Tower
1920 Broad Street
Regina, Saskatchewan
S4P 3V7

Phone: (306) 787-6398
Fax: (306) 787-6383

Internet e-mail: prov.auditor.paa@govmail.gov.sk.ca

AUDITOR'S REPORT

To the Members of the Legislative Assembly of Saskatchewan

I have audited the statement of financial position of the Saskatchewan Cancer Foundation as at March 31, 1999 and the statements of operations and changes in fund balances, and changes in financial position for the year then ended. The Foundation's management is responsible for preparing these financial statements for Treasury Board's approval. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Foundation as at March 31, 1999 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

Regina, Saskatchewan
June 25, 1999

W.R. Streliaff

Wayne Streliaff, CA
Provincial Auditor

SASKATCHEWAN CANCER FOUNDATION STATEMENT OF FINANCIAL POSITION As at March 31

	1999						1998
	Operating Funds		Restricted Funds				
	Operating Fund	Division of Epidemiology, Prevention & Screening	Capital Fund	Research Fund	Trust Fund	Total	Total
ASSETS							
Current assets:							
Cash and short-term investments	\$ 7,950,627	\$ 2,366,346	\$ 2,056,861	\$ 146,034	\$ 1,255,747	\$13,775,615	\$11,967,520
Accounts receivable:							
- General Revenue Fund	—	—	—	—	—	—	233,963
- Other and accrued interest	348,347	133,173	89,420	—	27,801	598,741	384,939
Prepaid expenses	102,013	4,193	—	20,485	3,000	129,691	53,865
Due (to) from other funds	146,602	(73,161)	9,382	(75,013)	(7,810)	—	—
	8,547,589	2,430,551	2,155,663	91,506	1,278,738	14,504,047	12,640,287
Capital assets (Note 3)	—	—	22,221,620	—	—	22,221,620	23,208,739
	<u>\$ 8,547,589</u>	<u>\$ 2,430,551</u>	<u>\$24,377,283</u>	<u>\$ 91,506</u>	<u>\$ 1,278,738</u>	<u>\$36,725,667</u>	<u>\$35,849,026</u>
LIABILITIES AND FUND BALANCES							
Current Liabilities:							
Accounts payable:							
- Trade	\$ 1,773,492	\$ 179,360	\$ 609,228	\$ 10,547	\$ 793	\$ 2,573,420	\$ 2,117,824
- Vacation	368,064	7,501	—	—	—	375,565	314,873
Deferred revenue	711,556	108,059	—	—	—	819,615	626,614
	2,853,112	294,920	609,228	10,547	793	3,768,600	3,059,311
Fund Balances:							
Invested in capital assets	—	—	22,221,620	—	—	22,221,620	23,208,739
Other capital fund net assets	—	—	1,546,435	—	—	1,546,435	1,609,090
Externally restricted, statement 2	—	—	—	80,959	1,277,945	1,358,904	2,107,999
Unrestricted, statement 2	5,694,477	2,135,631	—	—	—	7,830,108	5,863,887
	5,694,477	2,135,631	23,768,055	80,959	1,277,945	32,957,067	32,789,715
	<u>\$ 8,547,589</u>	<u>\$ 2,430,551</u>	<u>\$24,377,283</u>	<u>\$ 91,506</u>	<u>\$ 1,278,738</u>	<u>\$36,725,667</u>	<u>\$35,849,026</u>

(see accompanying notes to the financial statements.)

SASKATCHEWAN CANCER FOUNDATION
STATEMENT OF OPERATIONS AND CHANGES IN FUND BALANCES
Year ended March 31

	Operating Funds				Restricted Funds				
	Operating Fund	Division of Epidemiology, Prevention & Screening	Total 1999	Total 1998	Capital Fund	Research Fund	Trust Fund	Total 1999	Total 1998
Revenue:									
Funding from the Department of Health									
- General Revenue Fund	\$ 25,298,764	\$ 2,446,440	\$ 27,745,204	\$ 26,107,255	\$ 57,600	\$ 345,000	\$ —	\$ 402,600	\$ 558,000
Grants	—	—	—	—	—	179,162	—	179,162	118,235
Donations and bequests	—	—	—	—	—	—	212,955	212,955	257,225
Other income (loss)	760,843	117,208	878,051	954,423	(5,000)	3,291	—	(1,709)	70,990
	<u>26,059,607</u>	<u>2,563,648</u>	<u>28,623,255</u>	<u>27,061,678</u>	<u>52,600</u>	<u>527,453</u>	<u>212,955</u>	<u>793,008</u>	<u>1,004,450</u>
Expense:									
Divisions and general administration	14,212,329	1,535,691	15,748,020	14,145,184	—	—	—	—	—
Salaries and employee benefits	—	—	—	1,407,315	—	—	—	—	—
Medical services	6,323,992	—	6,323,992	6,483,727	—	—	—	—	—
Drugs and medical supplies	1,317,431	—	1,317,431	1,307,354	—	—	—	—	—
Purchased services	2,620,229	870,521	3,490,750	3,076,102	—	—	82,752	82,752	54,995
Other operating expenditures	—	—	—	—	—	804,383	—	804,383	703,714
Research grants (Schedule 1)	—	—	—	—	—	—	58,121	58,121	50,000
Trust fund grants	24,473,981	2,406,212	26,880,193	26,419,682	—	804,383	140,873	945,256	808,709
Investment income	1,585,626	157,436	1,743,062	641,996	52,600	(276,930)	72,082	(152,248)	195,741
Less investment income projects	576,699	162,676	739,375	575,156	46,843	8,653	206,995	262,491	220,283
	<u>2,162,325</u>	<u>320,112</u>	<u>2,482,437</u>	<u>1,211,743</u>	<u>99,443</u>	<u>(268,277)</u>	<u>279,077</u>	<u>110,243</u>	<u>416,024</u>
Less amortization expense	—	—	—	—	2,425,328	—	—	2,425,328	2,624,948
Excess (deficiency) of revenue over expense	2,162,325	320,112	2,482,437	1,211,743	(2,325,885)	(268,277)	279,077	(2,315,085)	(2,208,924)
Fund balances, beginning of year	4,048,368	1,815,519	5,863,887	5,087,644	24,817,829	142,118	1,965,881	26,925,828	28,699,252
Interfund transfers (Note 10)	(516,216)	—	(516,216)	(435,500)	1,276,111	207,118	(967,013)	516,216	435,500
Fund balances, end of year	<u>\$ 5,694,477</u>	<u>\$ 2,135,631</u>	<u>\$ 7,830,108</u>	<u>\$ 5,863,887</u>	<u>\$ 23,768,055</u>	<u>\$ 80,959</u>	<u>\$ 1,277,945</u>	<u>\$ 25,126,959</u>	<u>\$ 26,925,828</u>

(see accompanying notes to the financial statements.)

**SASKATCHEWAN CANCER FOUNDATION
STATEMENT OF CHANGES IN FINANCIAL POSITION
Year Ended March 31**

	<u>1999</u>	<u>1998</u>
Cash resources provided by (used in):		
OPERATING ACTIVITIES:		
Excess (deficiency) of revenue over expenditure (Statement 2):		
Operating fund	\$ 2,162,325	\$ 800,629
Division of Epidemiology, Prevention & Screening	320,112	411,114
Research fund	(268,277)	(157,634)
Trust fund	<u>279,077</u>	<u>289,013</u>
	2,493,237	1,343,122
Net change in non-cash working capital (Note 4)	<u>653,624</u>	<u>(2,183,870)</u>
Net cash (used in) provided by operating activities	3,146,861	(840,748)
INVESTMENT ACTIVITIES:		
Net acquisition of capital assets	(1,438,209)	(701,147)
FINANCING ACTIVITIES:		
Payment from General Revenue Fund for capital assets	57,600	213,000
Other capital fund activities	<u>41,843</u>	<u>71,645</u>
Net change in cash resources during the year	1,808,095	(1,257,250)
Cash and short-term investments, beginning of year	<u>11,967,520</u>	<u>13,224,770</u>
Cash and short-term investments, end of year	<u>\$ 13,775,615</u>	<u>\$ 11,967,520</u>

(see accompanying notes to the financial statements.)

SASKATCHEWAN CANCER FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS
March 31, 1999

1. Legal Status of the Saskatchewan Cancer Foundation

The Foundation was created under provisions of *The Cancer Foundation Act* and commenced operations on August 1, 1979. The Foundation conducts a program for the treatment and prevention of cancer.

2. Significant Accounting Policies

These financial statements have been prepared in accordance with generally accepted accounting principles and include the following significant policies:

a) Fund accounting

The accounts of the Foundation are maintained in accordance with the principles of fund accounting. For financial reporting purposes, accounts with similar characteristics have been combined into the following major funding groups:

Unrestricted Funds

i) Operating Fund

The operating fund reflects the operations of the Allan Blair Cancer Centre, the Saskatoon Cancer Centre and their respective patient lodges. The Centres provide diagnostic services, treatment services in radiotherapy and chemotherapy, and follow-up services. The Centres also serve as the focal point for the co-ordination of a comprehensive and multi-disciplinary approach to all aspects of care and treatment for cancer patients.

ii) Epidemiology, Prevention & Screening

Research, education and preventive programs in this fund are aimed at minimizing the impact of cancer through increased understanding and awareness of cancer causes, prevention and control.

Epidemiologic research studies the distribution and determinants of disease in populations, and includes surveillance, monitoring, risk factor and outcome studies, as well as program monitoring.

The Screening Program for Breast Cancer has responsibility for screening mammography for women ages 50-69 years of age in the Province.

Restricted Funds

iii) Capital Fund

The capital fund reflects the equity of the Foundation in capital assets. The capital fund includes revenues received from the Department of Health - General Revenue Fund. Expenses are primarily amortization of capital assets.

Notes to the Financial Statements

iv) Research Fund

The Department of Health - General Revenue Fund has provided funding to enable the Foundation to support a number of research projects. The Department of Health has attached the following guidelines to the funds:

- a) Expenditure of these funds is at the discretion of the Foundation. The Foundation will assume responsibility for research costs in excess of the amount funded.
- b) Research funds, including investment income on the funds, should be kept separate from other funds of the Foundation.

v) Trust Fund

The Trust Fund accepts donations for contributions designated by the contributors to be used for such purposes as cancer research, equipment and library books. The Foundation maintains a record of the funds contributed and spent for each of the designated purposes until such funds are fully utilized.

b) Revenue

All revenue is recorded on the accrual basis of accounting.

c) Short-term investments

Short-term investments are valued at cost, which approximates market.

d) Capital Assets

Capital assets are recorded at cost. Normal maintenance and repairs are expensed as incurred. Capital assets are amortized on a straight-line basis over their estimated useful lives as follows:

Buildings	20 years
Leasehold Alterations	10 - 20 years
Equipment	5 - 10 years

3. Capital Assets

	1999		1998	
	Cost	Accumulated Amortization	Net Book Value	Net Book Value
Land & Improvements	\$ 280,297	\$ —	\$ 280,297	\$ 280,297
Buildings	18,236,378	10,483,379	7,752,999	8,659,894
Leasehold Alterations	10,028,181	1,882,838	8,145,343	8,566,425
Equipment & Furniture	19,677,975	13,634,994	6,042,981	5,702,123
	<u>\$ 48,222,831</u>	<u>\$ 26,001,211</u>	<u>\$ 22,221,620</u>	<u>\$ 23,208,739</u>

4. Net Change in Non-Cash Working Capital Balances Related to Operations

	1999	1998
Decrease (increase) in General Revenue Fund receivable	\$ 233,963	\$ (212,628)
(Increase) decrease in other accounts receivable	(213,802)	2,366
(Increase) decrease in prepaid expenses	(75,826)	26,262
Increase (decrease) in trade accounts payable	455,596	(2,248,457)
Increase in vacation accrual	60,692	21,269
Increase in deferred revenue	193,001	227,318
Net change in non-cash working capital balances related to operations	<u>\$ 653,624</u>	<u>\$ (2,183,870)</u>

5. Pension Plan

The Foundation participates in The Public Employees' Pension Plan, a defined contribution pension plan, for the benefit of its employees. The Foundation's financial obligation to the plan is limited to making regular payments to match the amount contributed by the employees for current services. The Foundation's pension expense for 1999 amounted to \$573,363 (1998 - \$512,163).

6. Commitments

The Foundation is committed under term leases for office space at the following minimum amounts over the next five years (exclusive of proportionate increases and additional occupancy costs):

2000	\$ 132,469
2001	96,011
2002	25,927
2003	—
2004	—

7. Cancer Patient Lodges

The Canadian Cancer Society, Saskatchewan Division, has donated two cancer patient lodges in the Province to the Foundation. Under the terms of an agreement with the Society, the Foundation has assumed responsibility for the operations of these lodges. Title to the properties will remain with the Foundation so long as they are operated as cancer patient lodges.

Notes to the Financial Statements

8. Related Party Transactions

Included in these financial statements are transactions with various Saskatchewan Crown corporations, departments, agencies, boards and commissions related to the Foundation by virtue of common control by the Government of Saskatchewan and non-Crown corporations and enterprises subject to joint control and significant influence by the Government of Saskatchewan (collectively referred to as "related parties").

Drugs and purchased hospital services acquired from related parties are recorded at exchange amounts agreed to by the related parties. These transactions and amounts outstanding at year end are as follows:

	1999	1998
Expenses	\$ 10,467,257	\$ 10,544,845
Accounts payable	1,600,051	1,583,057

Routine operating transactions with related parties are settled at prevailing market prices under normal trade terms. These transactions and amounts outstanding at year end are as follows:

	1999	1998
Expenses	\$ 1,206,278	\$ 2,472,129
Accounts payable	32,603	74,735

In addition, the Foundation pays Saskatchewan Education and Health Tax to the Saskatchewan Department of Finance on all its taxable purchases. Taxes paid are recorded as part of the cost of those purchases.

The Regina Clinic is leased from the Regina District Health Board for \$1 per year, including a portion of occupancy costs.

The Saskatoon Clinic building owned by the Foundation is situated on land not owned by the Foundation. The Foundation is not charged for the use of this land.

Other amounts and transactions with related parties and the terms of settlement are described separately in these financial statements and notes thereto.

9. Financial Instruments

a) Significant terms and conditions

There are no significant terms and conditions related to financial instruments classified as current assets or current liabilities that may affect the amount, timing and certainty of future cash flows.

b) The carrying value of the following financial instruments approximate fair value due to their immediate or short-term nature:

Cash and short-term investments
Accounts receivable
Accounts payable

10. Interfund Transfers

Interfund transfers consist of funds transferred from the Operating, Division of Epidemiology, Prevention and Screening, Research and Trust Funds to the Capital Fund to finance the purchase of capital assets and funds transferred from the Operating Fund to the Research Fund for research activities.

11. Budgets

Schedule 2 compares actual expenditures to Board approved budgeted expenditures for the year ended March 31, 1999.

12. Uncertainty due to the Year 2000 Issue

The Year 2000 Issue arises because many computerized systems use two digits rather than four to identify a year. Date-sensitive systems may recognize the year 2000 as 1900 or some other date, resulting in errors when information using year 2000 dates is processed. In addition, similar problems may arise in some systems which use certain dates in 1999 to represent something other than a date. The effects of the Year 2000 Issue may be experienced before, on, or after January 1, 2000, and, if not addressed, the impact on operations and financial reporting may range from minor errors to significant systems failure which could affect an entity's ability to conduct normal business operations. While the Foundation is addressing the Year 2000 Issue, it is not possible to be certain that all aspects of the Year 2000 Issue affecting the Foundation, including those related to the efforts of customers, suppliers, or other third parties, will be fully resolved.

The Foundation has been addressing the Year 2000 issue for some time in an effort to ensure that all aspects of the Year 2000 Issue will be addressed. A Year 2000 Plan is in place and contingency plans are being developed.

Schedule 1

**SASKATCHEWAN CANCER FOUNDATION RESEARCH FUND
SCHEDULE OF RESEARCH GRANTS
Year Ended March 31**

	<u>1999</u>	<u>1998</u>
Participation in North Central Cancer Treatment Group	\$ 378,440	\$ 312,347
Participation in Children's Cancer Group	175,084	158,783
Research Director Fund, Saskatoon	1,256	2,107
Cell Surface Characteristics of Metastatic Cells in Human Tumors, Saskatoon	56,833	37,823
Novapharm Biotech, Saskatoon	(2,379)	74,079
Molecular basis of B72.3 Combining Sites and Synthesis, Saskatoon	78,019	25,860
Radiation Therapy Oncology Group, Saskatoon	28,929	24,528
Ovarian Cancer in Saskatchewan Patients, Saskatoon	5,348	22,675
Identification of p85 SH2 Binding Proteins, Saskatoon	60,596	45,512
C-Src and Colon Cancer, Saskatoon	10,048	—
Genomic Instability	4,263	—
Prostate Patient Immobilization	<u>13,328</u>	<u>—</u>
Total	809,765	703,714
Less capital expenditures	<u>(5,382)</u>	<u>—</u>
	<u><u>\$ 804,383</u></u>	<u><u>\$ 703,714</u></u>

Schedule 2

SASKATCHEWAN CANCER FOUNDATION
COMPARISON OF BUDGET TO ACTUAL
Year Ended March 31, 1999

	<u>Operating Fund</u>		<u>Division of Epidemiology, Prevention & Screening</u>	
	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>
Revenue:				
Funding from the Department of Health				
- General Revenue Fund	\$ 25,298,764	\$ 25,343,105	\$ 2,446,440	\$ 2,446,435
Other income	<u>760,843</u>	<u>545,295</u>	<u>117,208</u>	<u>63,000</u>
	<u>26,059,607</u>	<u>25,888,400</u>	<u>2,563,648</u>	<u>2,509,435</u>
Expenditures:				
Salaries & employee benefits	14,212,329	14,656,644	1,535,691	1,755,103
Medical services	—	—	—	—
Drugs and medical supplies	6,323,992	7,921,927	—	—
Purchased services	1,317,431	1,736,570	—	—
Other operating expenditures	<u>2,620,229</u>	<u>2,373,259</u>	<u>870,521</u>	<u>1,057,972</u>
	<u>24,473,981</u>	<u>26,688,400</u>	<u>2,406,212</u>	<u>2,813,075</u>
	1,585,626	(800,000)	157,436	(303,640)
Investment income	576,699	450,000	162,676	—
Less investment income projects	—	—	—	—
Excess (deficiency) of revenue over expenditure	<u>\$ 2,162,325</u>	<u>\$ (350,000)</u>	<u>\$ 320,112</u>	<u>\$ (303,640)</u>

Funded by the Saskatchewan Cancer Agency Research Fund

Participation in the Clinical Trials of the North Central Cancer Treatment Group (NCCTG) and National Cancer Institute of Canada Clinical Trials (NCIC-CTG) *Tiroa, M., Walley, B., Keller, O.* in collaboration with other medical staff of the Saskatoon Cancer Centre and the Allan Blair Cancer Centre.

In 1998-99, 44 cancer treatment patients and 75 cancer control patients were accrued in the NCCTG study. Thirty-four patients were accrued in the NCIC study. These numbers significantly exceed the minimum requirements for maintaining active membership.

Participation in Children's Cancer Group (CCG) *Ali, S.K., Goh, T.S.*

At the Saskatoon Cancer Centre, 22 new patients were registered. Seventeen of these were entered in therapeutic studies. Twenty patients were not eligible for specific studies but were treated as per CCG protocols.

At the Allan Blair Cancer Centre in Regina, six new CCG studies were approved; 53 received annual reapproval and 13 addenda were approved. During the year 28 patients were registered with CCG. Fifteen were enrolled in five therapeutic and 17 non-therapeutic studies. Thirteen new patients were not on therapeutic studies.

Radiation Therapy Oncology Group (RTOG) *MacLennan, I.* During the year, eight new patients were entered into this study. There are 35 patients who have been treated and are returning for regular follow-up appointments at the Saskatoon Cancer Centre, as required by protocol.

Role of Sialyltransferase-1 in Tumor Metastasis *Carlsen, S.* This project focuses on delineating some of the unique features of tumor cells which allow them to metastasize. The SAT-1 GENE in LN4 cells have been cloned, sequenced and expressed. It is apparent that expression of SAT-1 activity turns off isogloboside production in these cells which supports previous biochemical

and cell-cell fusion studies. We are now at a position to determine if isogloboside plays a role in the metastatic process by modulating the expression of isogloboside in a single clonally derived cell line. In addition, we have cloned and sequenced the putative metastasis suppressor gene *ms-1* which appears to be a transcriptional regulator. We have also identified a similar gene in human tumors. This opens up a whole new direction for our research program by allowing us to move into the human tumor system.

Molecular basis of B72.3 combining-sites and humanization of B72.3 antibody by resurfacing variable domains under the guidance of molecular modelling *Xiang, J.*

A computational model of B72.3 Fab/TA672 complex was developed and, based on the analysis of this model, 17 complementarity-determining residues were found to directly contact to the TAG 72 epitope with hydrogen bonding. Further site-directed mutagenesis at the rest of 14 CDRs were conducted. All the mutations have been verified by dideoxy nucleotide sequencing. In order to confirm that these 14 CDRs are the contact residues, these mutated gene fragments were inserted into the plasmid vector to form various expression vectors, which will be transfected into tumor cells for further expression.

Development of a Model for Ovarian Cancer *Maksymiuk, A., Magliocco, T.*

The objective of the project is to investigate the value of serum CA125 level, tissue expression of CA 125 and CEA antigens in predicting relapse free survival and overall survival in patients diagnosed with primary ovarian carcinoma treated with the contemporary platinum-based regimen. The conclusion is that serum CA125 level measurement in patients with CA 125 positive cancer is a valuable tool in predicting both relapse free survival and overall survival in patients treated with contemporary platinum based agents. Detection of CEA overexpression in mucinous carcinoma makes it a possible

complementary tool in patients with cancers not expressing CA 125.

Clinical and laboratory aspects of this project are complete and an abstract and presentation related to the work made to the Royal College of Physicians and Surgeons meeting in Toronto in September 1998.

Identification of p85 SH2 Binding Proteins *Anderson, D.*

The goal of this project is to identify new proteins involved in the regulation of cell growth and cell survival by looking for new binding partners for the non-catalytic 85 kDa (p85) subunit of phosphatidylinositol 3'-kinase (P13 kinase). Two such proteins have been identified — the serine/threonine kinase A-Raf and the structural protein ankyrin 3, each of which can bind to the p85 protein. This has led to a further related study.

C-Src and Colon Cancer *Bonham, K.*

This project investigates the regulation of the human SRC gene which encodes the tyrosine kinase pp60c-src. Activation of this enzyme has been linked to many normal physiological processes but also to the development of several human cancer types, most notably colon cancer. Activation of SRC in a number of human colon cancer cell lines resulted from the transcriptional regulation of the gene itself. Previously the SRC gene had been isolated and a promoter region described. However, this promoter appeared to be involved in the constitutive expression of the SRC gene. Most recently, another promoter has been isolated, located just upstream of the original. In contrast, this promoter displayed a highly tissue-specific pattern of expression. Most importantly, this promoter is activated in colon and liver cancer cell lines and preliminary results suggest it is regulated by a transcription factor called HNF-1 which regulates gene expression in the liver, kidney and most interestingly, the intestine. Characterization of this promoter promises to unlock the secrets of SRC deregulation in cancer and also answer some fundamental questions concerning SRC function in normal tissue.

Genomic Instability in Non-Hodgkin's Lymphoma *Al-Twaiger, T., DeCoteau, J., Magliocco, T.*

This project aims to study archival, paraffin-embedded tissue from 80 cases of Non-Hodgkin's Lymphoma for the presence of genomic instability, using aneuploidy and MMR deficiency as markers of instability. Secondly, the cases will be evaluated for the presence of p53 abnormalities and frameshift ID mutations to determine whether or not "aneuploid" NHL shows differences from "MMR deficient" NHL. Results of the former will be correlated with the clinical information to determine whether or not aneuploidy, MMR deficiency, or p53 status predicts tumor behavior. In order to establish the presence of an abnormal MMR pathway in human NHL, several detailed investigations were applied to 40 cases of follicular lymphoma and 40 cases of diffuse large cell lymphoma. The findings implicate deficient MMR gene function in the pathogenesis of human NHL and indicate screening for hMSH2 and hMLH1 protein expression. ID mutations within the coding region mononucleotide repeats of BAX and TBR-II represent the most efficient method to identify cases that arise via this pathway.

Prostate Patient Immobilization Study *Cadman, P., Sidhu, N., Lapointe, C., MacLennan, I.*

This study is concerned with the measurement of random and systematic setup errors for patients being treated for prostate cancer. This data is essential for determining the appropriate treatment margins to include in radiation treatment fields when moving towards 3-dimensional planning techniques and escalation of dose for prostate patients. One of three arms of the study has been completed to date with findings to be reported when the project is complete.

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Sylvia Fedoruk Prize in Medical Physics

Dr. Sylvia O. Fedoruk, a Medical Physicist with 35 years of dedicated and distinguished service to the Saskatchewan Cancer Program, retired in December, 1986. On the occasion of Dr. Fedoruk's retirement, the Board of the Cancer Agency announced the establishment of the Sylvia Fedoruk Prize in Medical Physics in her honour and in recognition of her contributions to cancer control.

This annual award is presented to the author selected as having published the best paper in Medical Physics in the preceding year, and must relate to work carried out within a Canadian institution. An anonymous selection committee, appointed jointly by the Canadian College of Physicists in Medicine and the Canadian Organization of Medical Physics, reviews the entries and recommends the successful candidates.

The award has been presented to:

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| 1987 | ROBERT NISHIKAWA, GORDON MAWDSLEY, AARON FENSTER, MARTIN YAFFE, co-authors of the paper "Scanned-projection digital mammography", published in Medical Physics . | 1991 | QING-SAN XIANG, R. MARK HENKELMAN, co-authors of the paper "Motion artifact reduction with three-point ghost phase cancellation", published in Journal of Magnetic Resonance Imaging . |
| 1988 | T. R. MACKIE, A. F. BIELAJEW, D. W. O. ROGERS, J. J. BATTISTA, co-authors of the paper "Generation of photon energy deposition kernels using the EGS Monte Carlo code", published in Physics in Medicine and Biology . | 1992 | D. L. D. MASON, J. J. BATTISTA, R. B. BARNETT, A. T. PORTER, co-authors of the paper "Ytterbium-169: calculated physical properties of a new radiation source for brachytherapy", published in Medical Physics . |
| 1989 | DUNCAN GALBRAITH, author of the paper "Low-energy imaging with high-energy bremsstrahlung beams", published in Medical Physics . | 1993 | JOHN M. SABOL, IAN C. SOUTAR, DONALD B PLEWES, co-authors of the paper "Mammographic scanning equalization radiography", published in Medical Physics . |
| 1990 | ALEX BIELAJEW, author of the paper "On the technique of extrapolation to obtain wall correction factors for ion chambers irradiated by photon beams", published in Medical Physics . | 1994 | R. M. HENKELMAN, G. J. STANISZ, J. K. KIM, M. J. BRONSKILL, co-authors of the paper "Anisotropy of NMR properties of tissues", published in Medical Physics . |
| | | 1995 | WEI ZHAO, JOHN ROWLANDS, co-authors of the paper "X-ray imaging using amorphous selenium: Feasibility of a flat panel self-scanned detector for digital radiology", published in Medical Physics . |
| | | 1996 | CHRIS HENRY, TERRY PETERS, co-authors of the paper "Three-dimensional reconstruction of vascular trees. Theory and methodology", published in Medical Physics . |
| | | 1997 | COREY ZANKOWSKI, ERVIN PODGORSK, co-authors of the paper, "Calibration of photon and electron beams with an extrapolation chamber", published in Medical Physics . |
| | | 1998 | ROBIN KELLY, KEVIN JORDAN, JERRY BATTISTA, co-authors of the paper, "Optical CT Reconstruction of 3D Dose Distributions using the FBX Gel Dosimeter", published in Medical Physics . |